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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/033,338

12/28/2001

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EXAMINER

AGHDAM, FRESHTEH N

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/033,338	<b>Applicant(s)</b> GOLLAMUDI ET AL.	
	<b>Examiner</b> FRESHTEH N. AGHDAM	<b>Art Unit</b> 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2, 7 and 16-20 is/are rejected.
- 7) ☒ Claim(s) 3-6 and 8-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 21, 2008 has been entered.

### ***Response to Arguments***

Applicant's arguments filed November 21, 2008 have been fully considered but they are not persuasive.

#### **Applicant's Arguments:**

Regarding claim 2, pages 8-9, the applicant argues the claimed subject matter "adjusting a first channel condition threshold in a transmitter based on a first error detection result from a receiving ... using a first variable size step for the adjusting, ... the first channel condition threshold based on a first modulation and coding scheme (MCS) level ... and the first variable size step is determined by the transmitter using a desired MCS error rate." is not taught or suggested by Chuang.

#### **Examiner's Response:**

Regarding the first argument set forth above, the examiner disagrees with the applicant because Chuang teaches adjusting a first channel condition threshold in a

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transmitter based on a first error detection result for a first data packet transmission between the transmitter and receiver using a first variable size step ( $C(p) = SIR - SIR_0$ ), wherein the first variable size step is determined by the transmitter (fig. 8) using a desired MCS error rate (BLER<sub>n</sub> is chosen as the desired MCS error rate).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 2 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Chuang et al (US 2005/0054296).

As to claim 2, Chuang discloses an adaptive quality control loop for a rate adaptation based on modulation and coding scheme (MCS) levels, the adaptive quality control loop method comprising the steps of: adjusting a first channel condition threshold based on a first error detection result for a first data packet transmission between a transmitter and a receiver using a first variable size step (Par. 6-7 and 49), wherein the first channel condition threshold is based on a first modulation and coding scheme (MCS) level used in the first data packet transmission, and the first variable

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step size is determined using a desired MCS error rate (e.g. BLER<sub>n</sub>) for the first MCS level (Par. 6-7, 41, 43, and 49-50).

As to claim 16, Chuang further discloses adjusting a second channel condition threshold based on a second error detection result for a second data packet transmission using a second variable size step, wherein the second channel condition threshold is associated with a second MCS level used in the second data packet transmission (Par. 6-7, 41, 43-44, and 49-50).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chuang et al.

As to claim 7, Chuang teaches all the subject matter claimed above, except for the desired MCS error rate is based on a bit error rate. Chuang discloses that the desired MCS error rate is based on a block error rate. However, one of ordinary skill in the art would clearly recognize that it is well known in the art to estimate level of performance of a communication system using any of the frame, block, or bit error rate. Therefore, it would have been obvious to one of ordinary skill in the art to employ the bit

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error rate instead of the block error rate as the quality measurement parameter in order to estimate the level of performance of the system.

As to claim 17, Chuang discloses all the subject matter as recited in claim 2, except for selecting a second MCS level based on an estimation of channel condition between the receiver and transmitter using a table having the adjusted first channel condition threshold. However, one of ordinary skill in the art would recognize that it is well known in the art to store different modulation coding schemes that correspond to different channel condition thresholds in a table and selecting the appropriate MCS level based on the estimate of the channel condition threshold in order to maximize throughput.

As to claims 18, Chuang inherently discloses transmitting a second data packet using the second MCS level.

As to claim 19, Chuang further discloses determining the first variable size step using the first error detection result (BLER<sub>n</sub>; Par. 41 and 50).

As to claim 20, Chuang a second variable size step using the second error detection result (BLER<sub>n</sub>; Par. 41 and 50).

### ***Allowable Subject Matter***

Claims 3-6, 8-10, and 11-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRESHTEH N. AGHDAM whose telephone number is (571)272-6037. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Freshteh N Aghdam/

Examiner, Art Unit 2611

/Chieh M Fan/

Supervisory Patent Examiner, Art Unit 2611